REMARKS

Upon entry of the attached amendments, claims 16 - 30 are pending in the application. Claims 1 - 15 have been canceled without prejudice, waiver, or disclaimer. Claims 16, 20 - 24, and 26 have been amended. The subject matter of amended claims 16, 20 - 24, and 26 is at least supported in FIGs. 2 – 4 and the related detailed description of Applicant's originally submitted specification. Accordingly, no new matter is added.

Reconsideration and allowance of the application and presently pending claims are respectfully requested.

I. Claim Rejections Under 35 U.S.C. § 102 – Claims 26 - 30

A. Statement of the Rejection

The Office Action indicates that claims 26 - 30 stand rejected under 35 U.S.C. § 102(b) over U.S. Patent 5,596,733 to Worley Jr. *et al.* (*Worley*).

B. Discussion of the Rejection

A proper rejection of a claim under 35 U.S.C. §102 requires that a single prior-art reference disclose each element, feature, or step of the claim. See *e.g.*, *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129. (Fed. Cir. 1988). Applicant's amended independent claim 26 includes at least one element/feature that is not found in *Worley*.

With regard to Applicant's amended independent claim 26, *Worley* fails to disclose, teach, or suggest "means for producing control signals responsive to a first data value, a second data value, and one or more exceptional conditions, wherein the exceptional conditions result from the execution of a multiply accumulate (MAC) unit over the first and second data values in sequential order, the means for producing configured to detect the one or more exceptional conditions."

In contrast with Applicant's claimed apparatus configured to perform single-instruction multiple-data instructions, FIG. 8 of *Worley* apparently shows a multiplexor (174) and a storage table (178) coupled between a functional unit (180) and an instruction results bus (178). The related description explains that multiplexor (174) selects between a value presented at output port (198) (of functional unit A) as the result of an instruction executed by the functional unit (180) and a default value from the storage table (176). The chosen value depends on whether the executed

instruction produced an exception for which a default value has been previously stored. (*Worley*, column 10, lines 21 - 27.) A multiplexor and a storage unit as illustrated and described in association with FIG. 8, which apparently describe a conditional selection of one of two values, does not disclose, teach, or suggest Applicant's claimed means for producing that detects the one or more exceptional conditions. A multiplexor reacts to an operational code. A multiplexor does not contain logic suited to detect one or more exceptional conditions. In addition, a storage unit can only write data presented to the unit or read previously stored data. While a suitably configured storage unit may contain executable instructions (logic), *Worley* is silent regarding storing and subsequently executing stored logic that is responsive to MAC unit results. *Worley* stores only default values. Accordingly, Applicant's claimed apparatus is allowable over *Worley* and the rejection of claim 26 should be withdrawn.

Because independent claim 26 is allowable, dependent claims 27 – 30 are also allowable for at least the reason that these claims contain all the features of independent claim 26. *See In re Fine*, 837, F.2d 1071, 5 U.S.P.Q.2d 1596, 1598. (Fed. Cir. 1988). Accordingly, Applicant respectfully requests that the rejection of claims 27 - 30 also be withdrawn.

II.   Claim Rejections Under 35 U.S.C. § 103 – Claims 16 - 25

A.   Statement of the Rejection

The Office Action indicates that claims 16 - 25 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent 6,230,257 to Roussel *et al.* (*Roussel*) in view of *Worley*.

B.   Discussion of the Rejection

In order for a claim to be properly rejected under 35 U.S.C. §103, "[t]he PTO has the burden under section 103 to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Applicant's claim 16, as amended, recites at least one element that is not disclosed, taught, or suggested by the proposed combination of *Roussel* with *Worley*. Specifically, the proposed combination does not show, teach, or suggest "a miscellaneous logic unit coupled between the result bus and the register, the miscellaneous logic unit configured to detect one or more exceptional conditions, the

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miscellaneous logic unit further configured to generate first and second control signals responsive to at least one certain exceptional condition."

Roussel apparently describes execution units that perform ADD and MUL operations and execution units that perform operations on half-width operands. *Worley* apparently describes a multiplexor and a storage unit coupled to an instruction results bus that shows a conditional selection of one of two stored values. In this regard, the cited references (*i.e., Roussel* and *Worley*) do not show Applicant's claimed miscellaneous logic unit that is configured to detect one or more exceptional conditions and generate first and second control signals responsive to at least one certain exceptional condition.

First, as shown above, a multiplexor reacts to an operational code by selecting one of multiple inputs to apply on an output of the multiplexor. Accordingly, a multiplexor does not detect one or more exceptional conditions. Second, as further shown above, *Worley* shows the conditional selection of one of two stored values. Stored values are not first and second control signals. Thus, the cited references fail to meet the burden of disclosing, teaching, or suggesting each feature of Applicant's claimed invention. Consequently, for at least this reason, the rejection fails to establish a *prima facie* case of obviousness when applied to Applicant's claims 16 - 19. Accordingly, the rejections of claims 16 – 19 under 35 U.S.C. § 103 should be withdrawn.

Applicant's claim 20, as amended, recites at least one element that is not disclosed, taught, or suggested by the proposed combination of *Roussel* with *Worley*. Specifically, the proposed combination does not show, teach, or suggest "using a miscellaneous logic unit configured to detect one or more exceptional conditions to generate a plurality of control signals responsive to the first data value, the second data value, and an exceptional condition, wherein the control signals direct whether the first MAC unit result and the second MAC unit result should be used or replaced by a representation of a specific exceptional condition, respectively."

Roussel apparently describes execution units that perform ADD and MUL operations and execution units that perform operations on half-width operands. *Worley* apparently describes a multiplexor and a storage unit coupled to an instruction results bus that shows a conditional selection of one of two stored values. In this regard, the cited references (*i.e., Roussel* and *Worley*) do not show Applicant's

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claimed miscellaneous logic unit that is configured to detect one or more exceptional conditions to generate a plurality of control signals responsive to the first data value, the second data value, and an exceptional condition, wherein the control signals direct whether the first MAC unit result and the second MAC unit result should be used or replaced by a representation of a specific exceptional condition, respectively.
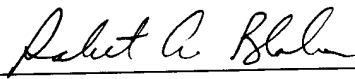
As shown above, a multiplexor reacts to an operational code by selecting one of multiple inputs to apply on an output of the multiplexor. Accordingly, a multiplexor does not detect one or more exceptional conditions. As further shown above, *Worley* shows the conditional selection of one of two stored values. Stored values are not first and second control signals. In addition, the stored values, apparently shown by *Worley* do not direct whether a first MAC unit result and a second MAC unit result should be used or replaced by a representation of a specific exceptional condition, respectively. Thus, the cited references fail to meet the burden of disclosing, teaching, or suggesting each feature of Applicant's claimed invention. Consequently, for at least this reason, the rejection fails to establish a *prima facie* case of obviousness when applied to Applicant's claims 20 - 25. Accordingly, the rejections of claims 20 – 25 under 35 U.S.C. § 103 should be withdrawn.

CONCLUSION

For at least the reasons set forth above, Applicant respectfully submits that claims 16 – 30 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500 (ext. 258).

Respectfully submitted,

**THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**

By: *Robert A. Blaha*

Robert A. Blaha
Registration No. 43,502

**THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**
100 Galleria Parkway, Suite 1750
Atlanta, Georgia 30339-5948
(770) 933-9500